Remarks

Claims 1, 5-6, 8-11, 15-16, and 18-20 are pending, and claims 1, 5-6, 8-11, 15-16, and 18-20 stand rejected. The Applicants have not amended the claims in this Response. The Applicants respectfully traverse the rejection of the Examiner as follows.

§ 103 Rejection

The Examiner rejected claims 1, 8-11, and 18-20 under 35 USC § 103(a) as being obvious in view of U.S. Patent Application Publication 2005/0065753 (Bigus) and U.S. Patent Application Publication 2003/0039352 (El-Fakih). The Applicants submit that the claims of the pending application are non-obvious over the cited references.

To paraphrase claim 1, a telecommunication system is disclosed for distributed system monitoring. The system includes peer communication devices that collect performance data responsive to handling telecommunications data, and transfer the performance data to a control system. The control system processes the performance data from each of the peer communication devices to generate a performance file that indicates the performance of each of the peer communication devices, and transfers the performance file to the peer communication devices. Each of the peer communication devices then processes the performance file to compare its performance to the performance of the other peer communication devices to detect a fault. Responsive to detection of the fault, one (or more) of the peer communication devices processes the performance file to identify a recovery action, and performs the recovery action to attempt to cure the fault.

Thus, as a high level overview, the control system provides a performance file to the peer communication devices, and the peer communication devices *evaluate their own performance*. More particularly, a peer communication device processes the performance file to compare its performance to the performance of the other peer communication devices to detect a fault, and performs a recovery action to attempt to cure the fault. This is truly distributed monitoring because the peer communication devices are monitoring their own performance based on the performance file provided by the control system. Traditionally, there was a centralized system that collected the performance data for peer communication devices, and analyzed the performance data of the peer communication devices to find faults. Thus, the centralized system

evaluated the performance of the peer communication devices, not the peer communication devices themselves. The system monitoring was centralized. Claim 1 is different in that it implements ***distributed*** monitoring where the peer communication devices evaluate their own performance and attempt to cure faults. The Applicants will show that the Examiner has again failed to provide any references that teach distributed monitoring as recited in claim 1.

Before addressing the rejections of the Examiner, the Applicants will briefly describe the cited references. Bigus describes a system that monitors the health of a computer system. The computer system includes a server that connects to clients over a network. See FIGS. 1 and 4. Each client includes a monitoring agent that compiles metric data about the client (e.g., CPU usage), and sends the metric data to the server. See FIG. 4 and ¶ [0061]. The server includes a health monitoring system that stores the metric data over a time period. See FIG. 4 and ¶ [0062]. The health monitoring system then analyzes the data to discern fuzzy ranges of normal performance of the clients and the system as a whole. See FIG. 4 and ¶ [0062]. For example, the fuzzy ranges may be averages of the metrics in the system, such as an average CPU usage. The health monitoring system then stores fuzzy sets representing the fuzzy ranges. See FIG. 4 and ¶ [0066]. If the health monitoring system wants to evaluate the performance of a client or the system as whole, then the health monitoring system collects current metric data, and compares the current metric data against the fuzzy sets and fuzzy rules. See FIG. 4 and ¶ [0066]. For example, the health monitoring system is able to determine whether the CPU usage in a client is currently above an average usage. The health monitoring system may then provide the results to a system administrator through a GUI. See FIG. 4 and ¶ [0072]. This may be a traffic light icon illustrating the present performance.

Thus, Bigus teaches a centralized server that analyzes the performance of a network, and provides the analysis to a system administrator. The Applicants point out that Bigus fails to describe providing performance data to peer devices so that the peer devices may evaluate their own performance.

El-Fekih describes a system similar to Bigus, where a centralized server collects performance data from elements a network. See ¶ [0006-0007]. The centralized server then analyzes the performance data for the network against performance requirements that were guaranteed to customers. This is done to verify that customers are receiving the level of quality that they expected. El-Fekih also states that a client (customer) may request a report from the

service provider verifying that they are receiving the level of quality that they expected. See ¶ [0010]. The report may also be used by the service provider to repair or reconfigure network resources. See ¶ [0010].

Thus, El-Fekih essentially describes a centralized system in a network that receives performance data, and analyzes the performance data to determine over overall performance of the network. The Applicants point out that El-Fekih fails to describe providing a performance file (indicating the performance of each peer device) to peer devices so that the peer devices may evaluate their own performance.

Looking at the limitations of claim 1, the Applicants first submit that the cited art does not teach a control system that "processes the performance data from each of the peer communication devices to generate a performance file that indicates the performance of each of the peer communication devices, and *transfers the performance file to each of the peer communication devices*" (emphasis added) as recited in claim 1. Because distributed monitoring is implemented in claim 1, the performance data for each peer device is aggregated together in a performance file, and the file is sent to each peer device. This allows the peer devices to evaluate their own performance (instead of relying on a centralized system). The Applicants submit that neither reference teaches a control system that transfers a performance file as in claim 1 to each peer communication device.

The Examiner has relied on El-Fekih in rejecting this limitation. See page 4 of the Office action. El-Fekih broadly states that a report of the network performance may be sent to a "customer" so that the customer can verify that they are receiving the proper level of service. For example, the report may state "You are receiving 1.55 Mbps of bandwidth". However, the "performance file" in claim 1 indicates the performance of each of the peer communication devices. There is no indication in El-Fekih that the "report" provided to the customer indicates the performance of each of the peer communication devices. It really would not make sense to have a report such as this in El-Fekih, as a customer only wants to know the overall network performance. In other words, the customer only wants to know whether they are receiving the level of service that the service provider guaranteed. The Examiner has cited to paragraph [0010] in El-Fekih, but this paragraph fails to indicate that the report indicates the performance of each peer device. Thus, the Applicants submit that the Examiner failed to show how the cited art teaches this limitation.

Secondly, the Applicants submit that the cited art does not teach "each of the peer communication devices, responsive to receipt of the performance file, processes the performance file to compare its performance to the performance of the other peer communication devices to detect a fault" as recited in claim 1. In this limitation, a peer communication device receives the performance file and processes the performance file to compare its performance to the performance of the other peer communication devices. Thus, the peer devices are evaluating their own performance based on the performance file. The Applicants submit that neither reference teaches peer devices that process a performance file as in claim 1 to evaluate their own performance.

The Examiner has cited to Bigus in rejecting this limitation. See page 4 of the Office action. However, Bigus uses a centralized server to collect performance data from the clients, and the centralized server evaluates the performance of the clients. The performance evaluation in Bigus is then provided to a system administrator through a GUI. However, there is no indication in Bigus that the clients themselves process a performance file to evaluate their own performance (e.g., identify faults). In rejecting this limitation, the Examiner states that Bigus "processes the performance file to compare its performance to the performance of the other peer communication devices to detect a fault". See page 4 of the Office action. The Applicants completely disagree with this assertion by the Examiner. The Examiner conveniently left out what device "processes the performance file". In claim 1, *each peer communication device* processes the performance file to compare its performance to the performance of the other peer communication devices to detect a fault. The Applicants have already shown that the clients in Bigus do not receive a performance file, and do not process a performance to compare their performance to the performance of the other clients to detect a fault. The centralized server in Bigus does all of the processing. The Examiner cannot take words out of the limitation merely for convenience. This has been an issue in prior Office actions, and the Applicants do not find it fair or appropriate. The Examiner needs to consider each word of the limitation, and claim 1 clearly recites that *each peer communication device* processes the performance file to compare its performance to the performance of the other peer communication devices to detect a fault. The Examiner has failed to show how Bigus teaches *peer communication devices* that operate in this manner. Thus, the Examiner's rejection based on Bigus is flawed and cannot support *prima facie* obviousness.

Lastly, the Applicants submit that the cited art does not teach "responsive to detection of the fault, at least one of the peer communication devices processes the performance file to identify at least one recovery action, and performs the at least one recovery action to attempt to cure the fault" as recited in claim 1. In this limitation, not only does a peer communication device evaluate its own performance (in relation to other peer communication devices), but it also performs the appropriate recovery action to cure a fault. The peer communication device does not need to rely on a centralized server (or system administrator) to cure a fault, and it initiates its own recover actions. The Applicants submit that neither reference teaches peer devices that perform recovery actions as in claim 1.

The Examiner has cited to El-Fekih in rejecting this limitation. See page 4 of the Office action. More particularly, the Examiner has cited to paragraph [0113] in rejecting this limitation, but the Applicants submit that the Examiner has misconstrued this paragraph. El-Fekih states that a system may analyze the network performance to determine whether the network is performing up to expectations. See ¶ [0113]. If the network performance is deficient, then a service provider or customer may be notified (such as by a report discussed above). The portion misconstrued by the Examiner is that El-Fekih states that a "client" receiving the report is able to take corrective action by reshaping traffic on the network. It would be obvious to one skilled in the art that El-Fekih is referring to the *service provider* as the type of client that is able to take corrective action by reshaping traffic on the network. A customer does not have to ability to reshape traffic on a network, as a customer is simply a user of the network. The service provider has access to management entities that are able to reshape traffic. The Examiner is relying on this one statement in El-Fekih to teach a peer communication device that processes a performance file to identify a recovery action, and performs the recovery action to attempt to cure a fault. This reliance is flawed because El-Fekih does not discuss a peer communication device that operates in this manner. A "corrective action" is taken in El-Fekih, but where does the reference state that the corrective action is taken *in a peer communication device* based on a performance file? The service provider in El-Fekih may take a corrective action by reshaping traffic, but there is no teaching that *a peer communication device* cures a fault based on a performance file as recited in claim 1. Thus, the Applicants submit that the Examiner failed to show how the cited art teaches this limitation.

In summary, claim 1 describes distributed monitoring where peer communication devices

evaluate their own performance based on a performance file, and perform recovery actions when a fault is detected. Neither reference cited by the Examiner describes peer devices that operate in this manner to evaluate their own performance and perform recovery actions. Both references cited by the Examiner use a centralized system that evaluates the overall performance of a network and provides reports. However, the references do not teach peer communication devices that evaluate their own performance and perform recovery actions.

Based on these remarks, the Applicants submit that claim 1 is non-obvious in view of Bigus and El-Fekih. Similar reasoning applies to the other pending claims.

Conclusion

Based on the remarks provided above, the Applicants submit that claims 1, 5-6, 8-11, 15-16, and 18-20 are allowable over the cited art. Thus, the Applicants ask the Examiner to reconsider the rejections and allow claims 1, 5-6, 8-11, 15-16, and 18-20.

Respectfully submitted,

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